

REMARKS

The specification, abstract and claims have been amended to employ more idiomatic English, and in the case of the claims, to address the objections under 35 U.S.C. § 112. No new matter has been entered.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



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CERTIFICATE OF MAILING

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Tool device**Device**

Field of the Invention

5 This invention relates to a tool device or tool carrier and more specifically to a folding tool device or tool carrier in which the functional tools are pivotally mounted on axles for convenient use and compact storage.

Background of the Invention

10 This invention concerns a tool device, or tool carrier that comprises, generally, two elongated side pieces connected by axles at either end of the device, wherein includes two sides and two axles extending between these and on the axles one or several tools or tool holders are pivotally or rotatably mounted journaled pivotable on one or both of the axles. The sides of the device have sufficient length for storing the functional tools, are advantageously elongate with the tool axles in each end of the sides so that combination tools are formed.

15 Examples of prior art include pocketknives of this are pocket knives that can include different work tools as knife, can-opener, corkscrew etc. The corkscrew is usually mounted rotatably pivoted on a third centrally placed axle so that it extends may be extended about 90° from the main body of the tool and form a T handle for turning the corkscrew.

20 Unfortunately, as those who may have tried to use such a corkscrew, the corkscrew has a tendency to fold, necessitating a very precise application of force. As everyone knows, who has tried to use a corkscrew of this kind to pull up a cork, the probability is great for the corkscrew trying to fold in and the corkscrew as such is not very practical, and in particular not if the turning has to be done with precision.

25 Combination tools are also desired in other situations, for instance example, the mounting and removal of horseshoe calks or frost nails on horseshoes. Such a tool necessitates require with necessity, in addition to one or several box wrenches, a thread tap to repair the threads in the shoes for the calks. At the The use of a thread tap also requires precise tool placement precision as well as the possibility to achieve a turning movement with great torque is required ability to achieve the proper torque. Here In this
30 instance, the pocket knife pocketknife version configuration is not suitable, as it does not

~~provide enough stability or torque instead here as for other purposes a combination tool with greater stability and torque is desirable.~~

Examples of prior art include U.S. Pat. Nos. 2473,758; 4,010,663; 4,204,294; and 6,088,861.

5 **Summary of the Invention**

~~The achieving of a tool device or a combination tool that can form a stable T-construction is thus desirable and the object of the invention is therefor to achieve such a solution.~~

10 There presently exists a need for a tool device that can form a stable T-construction. The present invention solves this problem by providing a tool device or tool carrier as previously described with two covers, one on each side of the device, wherein the covers are rotatably or pivotally mounted each on separate axles. The covers are designed as the means to lock a functional tool into place.

15 ~~In accordance with the invention this object is solved by the tool carrier being provided with a cover on each side of the tool carrier, each being journaled on one each of the axles extending between the sides. By the extending of one cover or the other tools journaled on the axles can be extended and then fixed to their positions by means of the covers.~~

20 In a first embodiment, this locking feature of the covers is achieved by rotating a first cover 180° so that a functional tool, rotatably mounted on the same axle as the first cover, when rotated 90° in the opposite direction may be fixed between the ends of the two covers. This configuration provides the stability and leverage lacking in the prior art.

25 ~~This locking can in a first version take place by one of the covers being pivotable close to 180°, so that a tool, journaled on the same axle that has been pivoted out in the opposite direction by a pivoting away of the other cover, can be fixed between the ends of the two covers when the first mentioned cover is maximally pivoted outward. In this way a T-tool is formed with great levers, that is entirely stable in the force transferring direction.~~

30 ~~The tool may for instance be a thread tap for the re-threading of calk holes in horseshoes.~~

Other embodiments include the ability to fix fully extended tools in place by designing contact surfaces on the tools that fit together with corresponding surfaces on the respective covers. Moreover, the corresponding surface on the cover may be in the form of an end tab or flange that serves to snap the cover into position, whether that position is in fully extended or in a closed or folded position.

~~Tools may also be fixed to their positions between the covers in the closed positions of these by the end edges of the covers cooperating with contact surfaces on the tools that so to say can lock extended tools between them. Advantageously the covers may also be provided with snap means in the form of an end tab or flange that resiliently can cooperate with the tools so that the locking position of the covers is fixed. The use positions of the covers, including the folded position, may if desired be possible to fix by means of snap means that cooperate with means on the covers.~~

Brief Description of the Drawings

~~Further advantages and characteristics of the invention are apparent from the following description of an embodiment shown on the enclosed drawings, in the shape of a combination tool for calk handling at horseshoes:~~

Further features and advantages of the invention will be seen from the following detailed description, taken in conjunction with the accompanying drawings, wherein like numerals depict like parts, and wherein:

FIG. 1 is an illustration of a side view of a combination tool device according to the present invention;

FIGS. 2 and 3 are perspective views of the combination tool device depicted in Fig. 1;

FIGS. 4 through 8 are perspective views of the combination tool device with a single tool shown rotated for use;

FIGS. 9 through 12 show how a thread tap tool is selected and fixed in place for use; and

FIGS. 13 and 14 show the combination tool device of FIG. 1 with one of the cover members open and closed, respectively.

~~In the figures 1 to 3 the combination tool is shown opened with its different tools~~

and figs. 4 to 8 show the combination tool with different tools extended and fixed, which tools extend in the length direction of the tool, in figs. 9 to 12 the extending and fixing of a thread tap is shown, in fig 13 the tool carrier is shown in yet another position of use and in fig. 14 the folded combination tool is shown.

5 Detailed Description of the Invention

Referring to FIGS. 1-3, the combination tool has two sides 1 and 2 that are connected by two axles 3 and 4 at their respective ends. As is apparent from the drawings the combination tool consists of two sides 1 and 2 that are connected with two axles 3 and 4. On the axle 3, a cover 5 is journaled and on the same axle a thread tap 6 is
10 are pivotally journaled mounted. The sides of the tool may be wider at this end, as illustrated in the drawings. On the other axle 4, a second cover 7 is journaled pivottally mounted together along with a knife blade 8, a hoof pick hook 9, two fixed box wrenches or keys 10 and 11, and a pointed tool pick 12 arranged, the latter e.g. for picking the removal of hard sitting set clay, or gravel etc. from threaded holes in the horseshoes
15 where calks are to be mounted. The thread tap or thread tapping 6 is intended for the restoration of repairing the threads when they have been damaged, for instance due to which may occur when pebbles being are pushed into the holes in a non-calked condition of the shoe.

In the context of horseshoes, calks and frostnails are frequently mounted and
20 dismounted. For example, calks must be removed before placing a horse in transport to avoid damaging the carrier. Calks also could cause damage to other horses. Further, the calks may be specific to certain types of terrain; e.g., longer calks for grassy surfaces and shorter calks with metal tips for icy roads. In the context may be mentioned that calks or frostnails has to be mounted and dismounted rather frequently. For instance one can not
25 allow the horses to travel with calks in transports since they on one hand can tread on themselves and on the other hand can damage floor and floor coating. Often the horses may not be allowed to go loose together with other horses without removal of the calks since they then also easily can harm each other. Furthermore the type of calk that is used must be adapted to the ground, for instance longer calks are used to get a good grip on
30 gras, while short calks with hard metals tips are used on icy winter roads.

Referring to FIGS. 4-8, ~~In figs. 4 to 8 is shown how the different functional tools that are journaled in the thin end of the tool pivotally mounted to axle 4 are rotated to a functional position by a lifting of the cover 5 that is journaled in the thicker end of the tool have been extended~~ pivotally mounted to axle 3. Thereafter the cover 5 is returned to its original position journaled in the thicker end has been swung back and pressed in behind a shoulder 13 present on every one of the each tool bracket[[s]]. ~~On the opposite side of the tool a~~ A corresponding shoulder is present that on the opposite side of the tool that is in contact with the edge of the cover journaled on the same side cover 7. With the covers closed thus a very stable holding of the tools is achieved. This creates a very stable locked position for the functional tool when it is extended for use. ~~Since the~~ The shoulders 13 are arranged so that the covers 5 and 7 become tangential to the shoulders 13, making the locking becomes feature very efficient reliable. This is important because one does not want to risk having the knife or one of the other functional tools fold over onto one's fingers in use. ~~One does not risk that the knife folds over the fingers and in particular at the use of the two fixed keys 10 and 11 a long torque lever and~~ In addition, a sturdy hand grip may be included to improve the functionality of the device. ~~is obtained for the tightening or loosening of calks that essentially simplify this operation. For greater torque, which is often required for removing calks, the cover that rotates about the axle that is opposite the tool being used may be pivotal outwards, creating a longer lever.~~

20 ~~The calks must be tightened forcefully in order to ensure that they remain and they may sometimes require even larger forces when they are to be loosened. If one at the use of the fixed keys turn the combination tool so that the force transfer is to the cover that is journaled in the same end as the key even the other cover can be extended so that the lever becomes even longer. Here however one has to be very careful and hold shoe or~~

25 ~~hoof fast since the turning otherwise may damage the joints of the horse.~~

FIGS. 9-12 show how the combination tool device is opened to use the thread tap 6. Both covers are opened and the thread tap 6 is pivoted in a direction opposite to that of the cover 5 that is mounted on the same axle 3 (see FIG. 10). The cover 7 that pivots about the opposite axle 4 is brought back to its original position. Cover 5 is fully

30 extended until both covers 5 and 7 align. Each cover has a semicircular notch 14,15 that

is arranged to stabilize the thread tap 6. In this manner, the covers absorb the bending forces that would otherwise cause the thread tap 6 to fold. This configuration creates a large T-handle with excellent leverage and superior stability. In figs. 9-12 is shown how the combination tool is opened at the use of the thread tap 6. Both covers are swung out and the thread tap is swung in the opposite direction to the cover 5 journaled in the same end (fig 10). The second cover or lid 7 is brought back to its closed position, while the cover that is journaled on the same axle as the thread tap is pivoted further in the opening direction, that is opposite to the thread tap, until this cover is more or less in line with the cover journaled in the narrow end. In the ends of the covers now facing each other semicircular recesses 14, 15 are arranged that precisely envelop the thread tap 6 that in this way has its position guided as well as supported. Bending forces do not only have to be taken by the fastening in the journaling on the axle but forces can also be taken by the covers. In this way the strains on the fastening of the thread tap is considerably lessened and reduce the risk that this becomes loose or damages occur. The thread tap is advantageously removable from a holder for instance by easing off and tightening an Allen screw. The Allen screw may either work against a flat surface on the square key-grip in the end of the thread tap alternatively against one of the corners. In connection with fig 5 can also be noted that one does not only achieve a T handle for the thread tap but also a T handle with large width and long torque levers so that the turning of the thread tap becomes easy and simple.

If desired, the thread tap 6 may be removed from the device by placing an Allen wrench in the square key grip at the base of the thread tap.

The thread tap also may be extended from the end of the device similar to the other tools as shown in FIGS. 4-8. This may be desired, for instance, when the thread tap 6 is being used to clean a hole and not to correct the threads. If so desired, and the thread tap is only used to clean the hole and not to correct the threads, tool and handle may be folded so that the thread tap simply extends axially from the tool, however this position is not very stable.

FIG. 13 shows how cover 5 is rotated to 180°. Two square holes in cover 5 may be used as keys or box wrenches and the remainder of the tool is used as a lever. In fig 6

is shown how only the cover 5 that is journaled in the larger end of the combination tool is pivoted out. Two square holes 16, 17 in this cover can now be used as keys and a good lever is achieved.

5 FIG. 14 shows how the tool is folded. The two square holes in cover 5 also may be used as keys or box wrenches in this position as well. In fig 7 is shown how the tool is folded. Also in this position the holes 16, 17 in the cover journaled in the larger end may of course be used for tightening or locking of calks. As also shown in FIG. 14, friction washers 18 may be placed on the axles between the different tools. This is done to keep the tools in their respective positions.

10 By arranging elastic washers 18 between the different parts journaled on the axles it is possible to guarantee that a friction force is always present so that the tools and the covers respectively retain their positions. Furthermore, it is also possible to form additional protrusions and/or depressions in the covers with corresponding features in the opposite cover to allow the device to snap or otherwise become fixed in an open or closed position.

15 Furthermore one can conceive to provide the covers and sides with cooperating protrusions and/or depressions so that these snappingly can grip into each other in the closed position and the position respectively where one cover, in this case the cover journaled in the larger end, is extended fully to be essentially in line with the other cover.

Additional thread taps also may be included in the device together with additional

20 keys. Also, the keys may be triangular in shape to allow gripping of different types of tools in a wedge-like action. These triangular keys may also be used as a square key when the device is in a position as shown in FIG. 13. In the shown embodiment the thread tap as well as the corresponding recesses in the covers are placed centrally, which makes the work with the thread tap easier. If so should be desired however further thread taps or

25 other tools may be arranged on the same axle and with corresponding recesses in the covers in order to allow T handle use. One can also consider the recesses being triangular so that they may not only constitute a support for a thread tap but also allow the gripping of for instance square calks with different width, where the covers together form a pliers-like device that can be pressed together by the cover journaled in the wider

30 end being pressed against the T-handle position.

The above described tool device use different manners of locking in the two ends, one can however if so is desired use the same locking manner in both ends. Yet other embodiments may be made without departing materially from the spirit and scope of the invention as defined in the appended claims.